

Health risk assessment of Nickel in the mangrove snail *Nerita lineata* Re-interpretation of published data

ABSTRACT

The nickel (Ni) concentrations in total soft tissues of the mangrove snail, *Nerita lineata*, were cited from three major publications in the literature. These Ni data, which cover across 42 populations from Peninsular Malaysia and 14 populations from Dumai, Indonesia, were applied in the determination of human health risk assessment (HHRA) via consumption of the snails. Based on the food safety guidelines recommended by the Joint FAO/WHO Expert Committee on Food Additives (JECFA) (provisional tolerable weekly intake) and USEPA (oral reference doses, ORD), the Ni concentration in all populations of snails investigated was unlikely to pose any risk through consumption. On top of that, the estimated daily intakes (EDI) were lower than the ORD guidelines for Ni for both average (ALM) and high (HLM) level mollusks consumers. The THQ values of Ni for both ALM and HLM consumers of snails from all populations in both countries were below 1. Therefore, the current study indicated no health risk of Ni exposure through snail consumption.